State of Wisconsin/Department of Transportation RESEARCH PROGRESS REPORT FOR THE QUARTER ENDING: Jun 30, 2003

Program: SPR-0010(36) FFY99 Part: II Research and Development

Project Title: Determination of Typical Resilient Modulus Values for

Selected Soils Representative of the Soils Distributions of Wisconsin

Administrative Contact: Nina McLawhorn

WisDOT Technical Contact: Bob Arndorfer Approved by COR/Steering Committee: \$103,049.00

Project Investigator (agency & contact): Hani Titi: UW-Milwaukee

Project ID: 0092-03-11

Sponsor:

Approved Starting Date: Jan 31, 2003 **Approved Ending Date:** Jan 31, 2005

Description: The study will be conducted over 24 months, and be completed in 5 phases:

Task 1: Literature Review on Resilient Modulus of Subgrade Soils

Task 2: Selection of a Wide Spectrum of Subgrade Soils that Comprise Core Soil Types in Wisconsin

Task 3: Evaluate the Effects of Soil Properties and Stress Levels on the Resilient Modulus of Wisconsin Sugrade Soils

Task 4: Analyses of Test Results and Development of Models to Predict Resilient Modulus

Task 5: Final Report

Total	Current	Expenditures for	Total Expenditures	Percent
Study Budget	FFY Budget	Current Quarter	to Date	Complete
\$103,049.00	\$34,349.66	\$14,000.00	\$0.00	20 (%)

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Progress This Ouarter:

(Includes project committee mtgs, work plan status, contract status, significant progress, etc.)

- 1. Project kickoff meeting in Truax Center in May 21, 2003
- 2. Conducted comprehensive literature search and collected papers and reports pertaining to resilient modulus testing
- 3. Prepared a preliminary draft on the literature material compiled
- 4. Identified soil types for the laboratory testing program
- 5. Manufactured special soil preparation setup for resilient modulus testing as required by AASHTO T 307. This consists of 2.8 and 4 inches in diameter molds, pistons, rings, and hydraulic pressure jack.
- 6. Obtained one soil type and conducted all required tests and established laboratory work plan
- 7. Obtained three soil types for the laboratory testing program
- 8. Conducted laboratory tests to characterize all soils collected. Tests include grain size analysis (sieve analysis and hydrometer analysis), specific gravity, density-water content relationship, etc.
- 9. Conducted resilient modulus tests on soil samples at the specified moisture content and density.

Work Next Quarter:

- 1. Obtain more soil samples
- 2. Continue laboratory testing program
- 3. Conduct preliminary analysis
- 4. Finalize literature review
- 5. Meet with the Project Oversight Team (POT) and make a presntation on the work progress

Circumstances affecting progress/budget:

Note: Gantt chart shown in State Fiscal Year Quarters